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| **Supplementary materials**  **About probit analysis and safety study**  **Tables for the parameters estimated for LD50 calculation through the probit analyses methods via SPSS program**   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | **Parameter Estimates** | | | | | | | | | **Zeolites** | **Parameter** | **Estimate** | **Std. Error** | **Z** | **Sig.** | **95% Confidence Interval** | | |  | **Lower Bound** | **Upper Bound** | | **PROBITa** | **mg/kg** | **5.597** | **1.359** | **4.117** | **.000** | **2.933** | **8.262** | | **Intercept** | **-19.658-** | **4.754** | **-4.135-** | **.000** | **-24.412-** | **-14.904-** | | **a. PROBIT model: PROBIT(p) = Intercept + BX (Covariates X are transformed using the base 10.000 logarithm.)** | | | | | | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Chi-Square Tests** | | | | | | **Zeolites** | | **Chi-Square** | **dfb** | **Sig.** | | **PROBIT** | **Pearson Goodness-of-Fit Test** | **1.639** | **8** | **.990a** | | **a. Since the significance level is greater than .050, no heterogeneity factor is used in the calculation of confidence limits.** | | | | | | **b. Statistics based on individual cases differ from statistics based on aggregated cases.** | | | | |     **Linear regression for the probit transformed responses for Zeolites toxicity estimation**   |  |  |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | --- | --- | | **Parameter Estimates** | | | | | | | | | **ZnO NPS** | **Parameter** | **Estimate** | **Std. Error** | **Z** | **Sig.** | **95% Confidence Interval** | | |  | **Lower Bound** | **Upper Bound** | | **PROBITa** | **mg/kg** | **7.439** | **2.193** | **3.392** | **.001** | **3.141** | **11.738** | | **Intercept** | **-26.553-** | **7.820** | **-3.396-** | **.001** | **-34.373-** | **-18.733-** | | **a. PROBIT model: PROBIT(p) = Intercept + BX (Covariates X are transformed using the base 10.000 logarithm.)** | | | | | | | |  |  |  |  |  |  | | --- | --- | --- | --- | --- | | **Chi-Square Tests** | | | | | | **ZnO NPs** | | **Chi-Square** | **dfb** | **Sig.** | | **PROBIT** | **Pearson Goodness-of-Fit Test** | **.522** | **8** | **1.000a** | | **a. Since the significance level is greater than .050, no heterogeneity factor is used in the calculation of confidence limits.** | | | | | | **b. Statistics based on individual cases differ from statistics based on aggregated cases.** | | | | | |
|  |

Chart, scatter chart

Description automatically generated

**Linear regression for the probit transformed responses for propolis toxicity estimation**

|  |  |  |  |  |  |  |  |
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| **Parameter Estimates** | | | | | | | |
| nanocomposite | Parameter | Estimate | Std. Error | Z | Sig. | 95% Confidence Interval | |
|  | Lower Bound | Upper Bound |
| PROBITa | mg/kg | 5.855 | 1.470 | 3.982 | .000 | 2.973 | 8.737 |
| Intercept | -20.051- | 4.994 | -4.015- | .000 | -25.044- | -15.057- |
| a. PROBIT model: PROBIT(p) = Intercept + BX (Covariates X are transformed using the base 10.000 logarithm.) | | | | | | | |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Chi-Square Tests** | | | | |
| nanocomposite | | Chi-Square | dfb | Sig. |
| PROBIT | Pearson Goodness-of-Fit Test | .539 | 7 | .999a |
| a. Since the significance level is greater than .050, no heterogeneity factor is used in the calculation of confidence limits. | | | | |
| b. Statistics based on individual cases differ from statistics based on aggregated cases. | | | | |

Chart, scatter chart

Description automatically generated

**Linear regression for the probit transformed responses for nanocomposite toxicity estimation**